MALIGNANT TUMORS

OF THE

EYELIDS AND ORBIT.

BY

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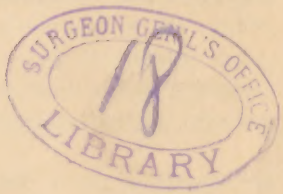
NEW YORK.



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The rarity and importance of malignant growths about the eye render a report of cases of this character instructive, for the larger the number of cases from which we draw our conclusions the more accurate will be our diagnosis and prognosis, and the more effective will be our treatment. Especially is this true if the disease presents peculiar features or the treatment astounding results. Within the past two years it has fallen to my lot to meet an unusual number of malignant tumors of the eyeball and its surroundings; but in this article I shall only consider those which have involved the eyelids, caruncula lachrymalis and orbit primarily, and from these draw such conclusions as the facts seem to warrant.

Case I.—*Epithelioma of lids.* Patrick M., *aet.* 58, came into N. Y. Ophthalmic Hospital, Oct. 21st, 1884, for operation. Ten years previously I had removed an epithelioma involving one half of the middle of right lower lid and filled in the gap thereby made by shifting a flap from the temple according to Dieffenbach's method. The operation was a perfect success, both in removing all deformity and in preventing any return of the disease at that point.

Upon his appearance on the above date (Oct., 1884), a tumor was found involving the outer two-thirds of the left lower lid and also a smaller one occupying the outer fourth of the left upper lid. These had been growing for two or three years. There was no indication of a return of the disease on the right side. Ether was administered and both tumors thoroughly removed. The space in lower lid was then filled by sliding flaps from the nose and temple according to Knapp's method (in which horizontal incisions are made from external canthus to temple and from internal canthus to nose. Then incisions are carried outward and inward from lower edge of wound almost horizontal, arching a little downward. Both of these flaps are dissected up and united end to end by sutures.) The wound in upper lid was easily closed by the

loose integument in that location. The eye was then bandaged (dry dressing) and patient put to bed. On the next day it was found that the central suture had given away, leaving a small gap in lower lid. Three weeks later he was discharged from hospital with wound perfectly healed and a small fissure at the centre of lower lid. After an interval of three months he again appeared, when it was found that the notch in lid had almost wholly disappeared. Up to this time there has been no tendency to a recurrence of the disease, and without a close examination one would not suspect that an operation had been performed.

Case II.—*Epithelioma at left internal canthus.* Mrs. M., aged sixty, had for years complained of a tumor near the left internal canthus, which, at the time of application for treatment, May 28th, 1885, presented an ulcerated surface, about three-fourths of an inch in diameter on left side of nose, involving the internal canthus, and was steadily increasing. Four days after an unsuccessful attempt to give ether had been made, she was given brandy, and cocaine was employed locally, when the whole ulcerating tumor was removed. As the surrounding tissues were abundant and loose, it was not found necessary to make a flap. By a little stretching of the integument and the introduction of three or four sutures, the wound was well covered. She made a rapid recovery and the resulting deformity was hardly perceptible.

Case III.—*Epithelioma of both upper and lower lids.* On April 16th, 1885, Mr. L. E. C. was sent to me by Prof. Helmuth on account of an epithelioma which had invaded the soft tissues on the left side of the nose almost to the top of the bridge and had extended outwards on the upper lid almost to the centre, and on the lower lid about four lines from the internal canthus. As the disease was rapidly spreading in all directions an operation for its removal was urgently recommended. On April 18th ether was administered. All the diseased tissues on nose and lids were thoroughly removed, thus leaving a large open wound. A large flap was then marked out on the forehead corresponding in form and size to the wound. This was dissected off (care being taken that it should not be thick, so as to appear clumsy), twisted somewhat upon itself and accurately fitted into the wound and fastened there by sutures, thus forming two good-looking lids and an internal canthus. After dissecting the integument in the vicinity of the wound on forehead, it was found that by considerable tension the wound could be closed and the edges united by sutures, which was done. On the fourth day pus began to form at one point on forehead, but was at once relieved by the removal of a suture. The flap healed readily in its new position and in two weeks he was allowed to return to his home in the

middle of the State. Eight months afterwards, when last seen, there was no indication of a return of the disease and his appearance was greatly improved, the scars being hardly noticeable. He only complained of lachrymation, owing to the closure of lachrymal canals, but it was not deemed advisable to attempt opening them at that time.

Remarks. These three cases of epithelioma of the lids and surrounding tissues present nothing new in ophthalmic surgery, but they well illustrate this form of tumor, the success which attends the different methods of removal and the little tendency to recurrence of the disease. Besides which, the second case demonstrated how little pain may be experienced from an operation of this character, when the patient is well under the influence of brandy, and when cocaine is used directly on the cut surface. The third case showed that a very large flap may be taken from the forehead and not cause a noticeable deformity, and that an artificial internal canthus may be formed which can hardly be distinguished from the original.

Case IV.—*Melanotic encephaloid carcinoma of palpebral conjunctiva of left eye.* On Oct. 21st, 1885, James McL., sixty years of age, came to my clinic at N. Y. Ophthalmic Hospital. Questioning elicited this meager history: The right eye had been blind for a long time. Two months ago he had noticed for the first time that the left eye was weak and somewhat inflamed, with moderate discharge and upper lid beginning to droop; all of which symptoms had been gradually growing worse. Examination showed R. V. p. l. L. V. $\frac{20}{30}$. There was a mature cataract of right eye and immature cataract of left eye. The right eye was otherwise normal. The conjunctiva of the left eye was moderately injected and accompanied by some discharge. The left upper lid drooped so as to half cover the pupil, and underneath it could be felt a tumor. Upon everting the lid, the tumor came into view; it was the size of a filbert, lobulated, dark in color, extending from the posterior border of the tarsal cartilage backward to retro-tarsal fold, and firmly attached throughout. At one point it seemed to break down easily under pressure of probe. Scattered over the palpebral conjunctiva, even to the border of the ocular conjunctiva, were here and there black pigmented spots. Two days later he was taken into the hospital, cocaine applied and the whole tumor excised as thoroughly as possible. There was no reaction from the operation, and the ptosis and inflammatory symptoms all disappeared. Some three months later he was again seen and no tendency to a recurrence could be detected.

The tumor was given to Prof. W. Storm White for microscopical examination, and to him I am indebted for the following description: "The structure of the tumor is somewhat peculiar in having the characteristics of melanotic encephaloid carcinoma with the alveoli filled with large, irregular and somewhat flattened cells (with spherical or ellipsoidal nuclei), instead of the ordinary small, irregular or cuboidal cells. In fact, these alveoli appear somewhat like the 'perlen' or 'nests' of epithelioma, lacking, however, the concentric arrangement of the elements. The pigmentation is of two varieties, which can be quite easily distinguished. 1st. From parenchymatous hemorrhage, which is seen in many locations throughout the whole tumor. 2d. Melanotic pigmentation of the cellular elements in certain circumscribed locations in the mass. The alveoli are small, perfectly formed and packed full of the epithelioid cells, and there can be no doubt concerning the diagnosis, particularly as the adipose tissue which was removed with the tumor shows the characteristic invasion of its tissue by the 'strings' of cancerous nature. The diagnosis is therefore *Melanotic Encephaloid Carcinoma* (the so-called alveolar cancer.) The prognosis is bad, as its return is certain."

Remarks. This form of tumor in the above situation is extremely rare. An examination of the literature accessible to me reveals only one case which closely corresponds to the one just cited. This one is reported by Horner in *Klin. Monatsbl.*, 1871, s. 4. It occurred in a woman sixty-four years of age, was darkly pigmented, presented an uneven surface, bled easily on slightest touch and was attached by a pedicle to the middle of the upper tarsal border. It was excised, and there had been no return eight months afterward. Hirschberg in *Klin. Monatsbl.*, 1870, s. 191, describes a somewhat similar case as cancer, occurring on the palpebral conjunctiva of the upper lid of a man sixty-two years of age. The neoplasm, however, was not pigmented, but of a yellow-red color, nodulated appearance and cartilaginous consistency. It was successfully removed. Talko records in *Klin. Monatsbl.*, 1873, s. 327, a case of sarcoma of small spindle cells which grew from the tarsus of upper lid of a boy twelve years of age. In this case there was no recurrence seven weeks after removal of tumor, when the child was last seen. We may, therefore, conclude that the probabilities of a relapse are not so great as the character of the tumor would lead us to expect.

Case V.—*Tumor of right caruncula lachrymalis.* Jan. 14th, 1885, Clarence C., fifteen years of age, was recommended to me by Dr. Lount,

of Hempstead, Long Island. About one week previous to the above date an inflammation at right internal canthus had made its appearance without any apparent cause, and had been gradually increasing since. The boy was of light complexion, pale and somewhat delicate looking. Upon examination a tumor of the right caruncle was easily diagnosticated; it was about one half of an inch in length and one third in width, of a bright red color like an inflamed polypus, and was accompanied by moderate inflammation of the adjacent conjunctiva, with slight discharge. About one half of the tumor was excised for microscopical examination; it was found to be hard throughout and vascular. About a week later he began to complain of swelling of the right parotid gland. He was then seen by Prof. Dillow in consultation, when Merc. prot. ii. was prescribed. The glandular swelling, however, steadily increased, though the tumor in eye decreased owing to repeated excisions and the use of caustics. On Jan. 31st note was made that the tumor had been examined by Drs. Heitzman, Tims and A. B. Norton, and all had pronounced it to be a *large round cell sarcoma.* At that time the parotid had been steadily enlarging, was almost immovable, and the swelling seemed to be extending to the back of the neck, where the cervical glands were all swollen and hard. In front of the right ear was a movable tumor the size of a hickory nut. These swellings were not red and inflamed, though he complained of sharp pain in the neck on moving the head or even in walking across the room. Bryonia iii. was now alternated with the Merc. prot. ii. The boy was allowed only a short time to live, but to our surprise the pain was at once relieved and all the tumors began to decrease in size, so that in ten days he was allowed to return to his home, the same remedies being continued. Two or three weeks afterward, Dr. Lount told me that all the tumors had disappeared and the boy seemed perfectly well.

Remarks. This case is submitted without an expression of opinion. If the boy had died there would have been no hesitation or doubt as to the correctness of the diagnosis of "sarcoma," As he recovered, the question arises, Was the diagnosis incorrect, owing to the peculiar structure of the caruncula lachrymalis undergoing changes in a benign growth (adenoma) which simulated sarcoma? or was it really sarcoma cured by internal medication?

Case VI.—*Encephaloid sarcoma of the orbit.* Mrs. R., aged 53, came to me, Oct. 12th, 1885, at N. Y. Ophthalmic Hospital, on account of a protrusion of the right eye. She was a large, apparently strong and healthy woman; she considered herself perfectly well, and had

never complained of headache. Two years previously, however, she had been operated for a cancer of the left breast, said to be "scirrhus." For six weeks she had noticed a protrusion of the right eyeball, which had been steadily increasing.

Upon examination a marked exophthalmos of the right eye was found; the anterior surface of the right cornea being about one half inch in advance of the left. By pressing with fingers into orbit around the right eye, a hard tumor could be detected at upper and outer angle; it was immovable and was not connected with the eyeball. Movement of the eye upward and outward was impaired and double vision produced in that portion of the field. She complained of some aching pain, but not severe at any time—R.V. $\frac{20}{100}$, L.V. $\frac{20}{20}$. There was no improvement with glasses, though nothing abnormal could be found in the fundus except a slight paleness of the optic papilla in right eye. An operation for removal of the tumor was recommended. The consent of the patient to remove the eyeball, if it was thought advisable, was obtained, though its preservation was intended.

On Oct. 15th, she came into the hospital for removal of the neoplasm. She seemed somewhat nervous before the operation, and the pulse occasionally intermitted. Ether was administered by Dr. Warner. When under its influence, I made an incision at the edge of the orbit, from the outer third of upper lid to outer sixth of lower lid, through the muscles and fasciæ into the orbit, then pressing the eyeball inwards, the tumor could be distinctly felt with the finger. Using the finger as a guide, I dissected out, by means of blunt pointed scissors and the handle of a scalpel, a hard lobulated growth about one inch in length by three-quarters of an inch in width. It was situated at the upper and outer angle of the orbit and extended from the posterior portion of the lachrymal gland to the optic foramen. It was closely adherent to the bone throughout its whole extent. After its removal the bone was found rough and carious, easily breaking down upon any attempt to scrape its surface, though did remove a portion. Finding it impossible to remove all the diseased bone, and the patient not taking the ether well, I desisted from further operative measures. After the hemorrhage, which was not excessive, had been controlled, I introduced two or three sutures above, inserted a drainage tube and put the patient to bed, using ice dressings. The eye with its muscles intact was saved, as the disease had not invaded these structures. ℞ Hypericum ♎.

Oct. 16th. There had been considerable nausea and vomiting during the night and day, especially upon any attempt to eat. There had been no hemorrhage. The eyeball was much protruded, with ecchymosis of lid and chemosis. The patient had experienced no pain,

only complaining of great sensitiveness of the eye to touch. At 11 P. M. the temperature was 104, pulse very irregular, intermitting every three to five beats, and she seemed to be passing into a stupor. There was no change in the appearance of eye. Prof. Doughty saw the case with me at this time, and continued in consultation during the remainder of her life. A poultice was now substituted for the ice, and Verat. vir. ♎ in alternation with Bell. ♎ was administered internally. Carbonic acid water was given to drink.

Oct. 17th. At 6 A. M. the temperature was 102.5, pulse stronger, only occasionally intermitting, and there had been no vomiting; had taken nourishment several times. At 2.30 P. M. temperature was 105, but the swelling around eye seemed a little less. She had now become very restless and thirsty, constantly moving from one position to another, and desiring large quantities of water to drink. She experienced no pain, with the exception of an aching in the back. Aconite was now given in place of the Verat. vir. At 10 P. M. temperature 105. A commencing erysipelatous blush could be observed around the right eye. Rhus tox. ♎ was now alternated with the Aconite.

Oct. 18th, 3 A. M., temperature 103.5, was still restless and would not keep the poultice on. Eight A. M., temperature 104; had slept well and taken food several times. Seven P. M. temperature 102.5. The erysipelatous blush had entirely disappeared. The discharge from the wound was slightly purulent and bloody. The orbit was carefully cleansed two or three times a day with a warm solution of boraccic acid, and the wound kept open by a tent during the whole course of treatment.

Oct. 19th, 7 A. M., temperature 100.5. She had rested well during the night, was feeling good at this time and asked for something to eat. Three P. M., temperature 102. The protrusion of the eye was less, the cornea clear, and vision fair.

Oct. 20th, 8 A. M., temperature 101.5. Again became restless and inclined to talk considerably. Two-thirty P. M., temperature 103.2. Since morning she had been constantly and rapidly muttering or talking upon irrelevant subjects, going from one to another without a break in the connection. When spoken to she would answer rationally enough but ran the answer into an entirely different subject. There was also a constant picking with the hands and desire to uncover herself. She was very restless and it was with difficulty she could be kept in bed. She complained especially of an aching in the back and neck, and for the first time upon careful questioning said there was a slight aching in the head. Hyos. ^{200} was given. Nine P. M., temp. 103. No change in symptoms. Hyos. ♎ was prescribed.

Oct. 21st, 8 A. M. temp. 102. No change. Baptisia ℞. Two P. M. temp. 101-3. Pulse 84, and regular. For an hour or two had been quiet, would answer when spoken to, but appeared somewhat dull. Complained only of the neck being stiff, with pain on moving it, especially towards the left. There was more pus from the wound. The ophthalmoscope showed hyperæmia of the left optic disk, with blurring of its outlines and veiling of the vessels.

Oct. 22d, 8 A. M., temp. 102.3. Had a very quiet night, apparently sleeping naturally, lying with head turned to the right side. When spoken to would answer, but did not seem to comprehend what was said. Urine was passed involuntarily several times during the night, and was of an offensive odor. (Two other patients in ward had same odor to urine.) Two-thirty P. M., temp. 104.2. Pulse 102, but regular. Patient appeared more rational, and complained of slight pain on the right side of head. For two hours had been under Baptisia and Phos. ac. Seven P. M., temp. 102.6. More restless.

Oct. 23d, 8 A. M., temp. 101.2. Appeared somewhat better. Twelve M. Since morning there was a marked change for the worse; the left side of body was completely paralyzed; the urine was voided involuntarily; she had become nearly unconscious, but could be roused when spoken to loudly, though could not articulate; was gradually growing weaker.

Oct. 24th. Comatose all day.

Oct. 25th. Coma continued until her death at 7 A. M.

The autopsy was made by Prof. W. Storm White, who has kindly furnished me with the following report:

"*Autopsy* held Oct. 25th, 1885, at 11.30 A. M., in the presence of Drs. Doughty, Norton, Leal, Warner, and others, on the body of Mrs. R., *æt.* 53, at the N. Y. Ophthalmic Hospital, about six hours after the death of the patient.

"Rigor mortis slightly presented, but the P. M. staining was quite marked in all the pendant portions of the body. The usual signs of death were all present. The external surface of the body quite normal excepting an incision about half an inch from the external canthus of the right eye, through which a portion of an intra-orbital tumor had been removed ten days since. The scalp showed the characteristic crusts of eczema capitis. The body was still warm and was well nourished. The usual incision was made in the scalp, extending from ear to ear over the crown of the head, and the flaps thrown back. Then the circular section of the bone was made, and the skull-cap thus removed. Covering the outer surface of the dura-mater over the vertex was a green-yellow, tenacious, pseudo-membrane. The external and internal plates

were perfectly normal, but the dura-mater presented the characteristics of peri-pachymeningitis, and of pachymeningitis of old standing, with an acute congestion, particularly along the line of the longitudinal sinus. The pia mater was highly congested and a large quantity of serous fluid was seen beneath the pia, between it and the brain. The whole space surrounding the medulla oblongata was filled with the serous effusion. The whole substance of the brain was highly congested, especially on the left side, and particularly the middle lobe of that side. The lateral ventricles were filled with a slightly sanguineous, serous fluid, and the choroid plexus of the left side was somewhat more œdematous than that of the right. The remaining ventricles were apparently quite normal, excepting that they all contained more or less fluid. In the left anterior lobe of the cerebrum (the superior portion of the middle frontal convolution) was a well defined cyst, filled with a transparent, serous-like fluid, as large as an English walnut, and just anterior to this was a small tumor, the size of a filbert, similar in all respects to the one which had caused the perforation of the orbital plates, described below. The small tumor was surrounded by the usual zone of softened cerebral substance seen so often in cerebral tumors.

"On removing the dura-mater from the region of the orbital plates of the right side, an interesting state of affairs was presented to view, consisting, 1st, of a quite small recent hemorrhage, external to the dura, and 2d, of perforation of the superior and lateral orbital plates, with extensive necrosis of those structures, and the space being filled with a neoplastic development which had evidently caused the necrosis. The more or less necrosed bone and healthy bone were removed with the chisel, and the posterior portion of the globe of the eye presented to view. The seat of the operation of ten days ago showed the usual aspects of traumatic (surgical) injuries going on to recovery. The portion of the tumor left after the operation was found in the posterior lateral and the posterior superior portions of the cavity, corresponding to the positions of the necroses above mentioned.

"The *microscopical examinations* proved that the bone was not simply absorbed, because of pressure, but had been the seat of an inflammatory process, but showed no "sarcomatous infiltration." The tumor was *encephaloid sarcoma*, and the secondary tumor, found in the brain, was of the same variety, showing that generalization had already taken place. The viscera were not examined, as we had found sufficient *cause of death: acute cerebral congestion, effusion, coma, death.*"

Remarks. There are several points in the history of this case which are not easy of explanation and will always probably remain mysteries. It is, in the first place, very

strange that she should have had so extensive a sarcomatous tumor in the orbit, and also one in the brain, without experiencing any headache. Secondly, in what manner did the operation for removal of the tumor from the orbit produce so severe a form of cerebritis? The only intra-cranial change at point of operation was a very small hemorrhage external to the dura-mater; but the inflammatory changes in the membranes and brain at this place were no more pronounced, even less marked, than in other portions. Again the severity of the inflammation, its rapid course, the high temperature, the almost total absence of pain in the head and the non-occurrence of paralysis, with lack of cerebral symptoms and almost perfect consciousness until so near the end, all form a remarkable and unexplained train of symptoms.

Two other cases of sarcoma of the orbit have been under my observation during the past two years. One was in a young girl about eighteen years of age. It grew from the inner wall of the orbit and extended into the frontal sinuses. This case Prof. Knapp saw in consultation with me, and as he was willing to assume the responsibility of an operation, the patient being willing, was turned over to his care. The operation demonstrated that it was impossible to remove all the diseased mass. Its return and growth were rapid and death soon ensued. The second case, occurring in a woman about fifty-five years old, was seen one year ago. The tumor started from the floor of the right orbit, but soon invaded the Antrum of Highmore. This case was also seen by Prof. Knapp, who concurred with me that an operation was not advisable owing to the extent of the disease and the low condition of the patient's general health. During last summer and fall the patient grew stronger, and for a time the increase of tumor seemed checked; but the improvement was only temporary, as it soon again went on its course until it had involved the whole cheek and eaten its way through the superior maxilla into the mouth. Death relieved her sufferings last month, a little more than a year from the first indications of the presence of a malignant growth.